

CLAIMS

1. An electromagnetic shielding structure comprising
5 at least a first transparent substrate (20), a
conducting element (30) deposited on a transparent
plastic backing sheet (31) or else deposited on the
first substrate (20), and a transparent plastic tie
sheet (22) that ties the conducting element (30) to the
10 substrate (20) by the backing sheet (31) being joined
to the tie sheet (22), or else that covers the
conducting element (30) when the latter is deposited
directly on the substrate (20), it being possible for a
15 transparent additional sheet (23) or covering sheet
(24) to be optionally joined to the backing sheet (31)
against the opposite face to the face joined to the tie
sheet (22) or else possibly being optionally joined to
the tie sheet (22) when the conducting element (30) is
20 deposited directly on the substrate (20), electrical
connection means (40) being intended to be connected to
the conducting element (30) in order to ground the
latter, characterized in that one at least of the
backing sheet (31), the tie sheet (22) or the
25 additional sheet (23) or covering sheet (24), when it
is present, is, at least on one of its sides, placed
set back toward the interior of the structure relative
to the associated free edge of the transparent
substrate (20) so as to leave a portion (32) exposed on
30 at least one of the faces (30a, 30b) of the conducting
element, the connection means (40) being placed against
and/or connected to this exposed portion (32).

2. The structure as claimed in claim 1 and with the
conducting element (30) deposited on the backing sheet
35 (31), characterized in that the conducting element (30)
is sandwiched between the tie sheet (22) and the
backing sheet (31), and at least the tie sheet (22) is,
on at least one of its sides, placed set back relative

to the associated free edge of the transparent substrate (20) so as to leave space for a free part (20a) of the transparent substrate and for an exposed portion (32) of the conducting element, this free part 5 (20a) facing the exposed portion (32) of the conducting element, and in that the connection means (40) are fastened by adhesive bonding to the free part (20a) of the substrate and are connected via electrical bonding means (41) to that exposed portion (32) of the 10 conducting element facing the free part (20a).

3. The structure as claimed in claim 1 and with the conducting element (30) deposited on the backing sheet (31), characterized in that the conducting element (30) 15 is sandwiched between the tie sheet (22) and the backing sheet (31), and at least the backing sheet (31) and, when it is present, the additional sheet (23) are, at least on one of their sides, placed set back relative to the associated free edge of the transparent 20 substrate (20) so as to leave space for an exposed portion (32) of the conducting element, and in that the connection means (40) are fastened by adhesive bonding and/or by mechanical crimping to the exposed portion (32) of the conducting element.

25 4. The structure as claimed in claim 1 and with the conducting element (30) deposited on the backing sheet (31) and including the covering sheet (24), characterized in that the conducting element (30) 30 deposited on the backing sheet (31) is placed opposite the tie sheet (22) and sandwiched between the backing sheet (31) and the covering sheet (24), the covering sheet (24) being, at least on one of its sides, set back toward the interior of the structure relative to 35 the associated free edge of the transparent substrate (20) in order to leave space for an exposed portion (32) of the conducting element, and in that the connection means (40) are fastened by adhesive bonding

and/or by mechanical crimping to the exposed portion (32) of the conducting element.

5. The structure as claimed in claim 1 and with the
5 conducting element (30) deposited on the substrate
(20), characterized in that at least the tie sheet (22)
and, when it is present, the covering sheet (24) are,
on at least one of their sides, set back toward the
interior of the structure relative to the associated
10 free edge of the transparent substrate (20) in order to
leave the exposed portion (32) of the conducting
element accessible, and in that the connection means
(40) are fastened by adhesive bonding and/or by
mechanical crimping to the exposed portion (32) of the
15 conducting element.

6. The structure as claimed in any one of the
preceding claims, characterized in that the conducting
element (30) is a silver-based metal layer.

20 7. The structure as claimed in one of claims 2 to 4,
characterized in that the conducting element (30)
consists of a mesh of conducting wires, preferably
copper wires.

25 8. The structure as claimed in any one of the
preceding claims, characterized in that the connection
means (40) consist of a flat conductor such as a busbar
or a conductive foam tape.

30 9. The structure as claimed in any one of the
preceding claims, characterized in that all of the
periphery of the first substrate (20) of the face
situated toward the interior of the structure or else
35 the free part (20a) of said first substrate is covered
with an enamel.

10 The structure as claimed in any one of the
preceding claims, characterized in that the exposed

portion (32) corresponds, in the manner of a frame, to the entire periphery of one of the faces (30, 30b) of the conducting element.

5 11. The structure as claimed in any one of the preceding claims, characterized in that the backing sheet (31) is made of a plastic, for example PET or one based on one of the following materials: polycarbonate, polymethyl (meth)acrylate, polyethersulfone, polyetherketone and styrene-acrylonitrile copolymers.
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12. The structure as claimed in any one of the preceding claims, characterized in that the tie sheet (22), the additional sheet (23) and the covering sheet 15 (24) are made of a plastic, such as polyvinyl butyral, polyurethane or ethylene-vinyl acetate.

13. The structure as claimed in any one of the preceding claims, characterized in that it is fitted 20 into a frame (5), the inner part (50) of which is metallic, the connection means (40) pressing against said inner part.

14. The structure as claimed in any one of the 25 preceding claims, characterized in that it is joined to the front face of a display, such as a plasma display, and connected to the electrical ground of this display.